

**WHAT WE CLAIM IS:**

1. A sensor apparatus adapted to be used with extraction machinery, said extraction machinery including a plurality of extraction elements which when activated are adapted to deliver an extracted fluid from two or more extraction elements into at least one collection line,  
the sensor apparatus including at least one sensor associated with said at least one collection line, and  
at least one controller adapted to control the activation of said extraction elements,  
whereby activation of said extraction elements is controlled to prevent said at least one sensor being exposed to extracted fluid supplied from all of said extraction elements at any one time.
2. A sensor apparatus as claimed in claim 1 wherein the extraction machinery used with the sensor apparatus is dairy animal milking machinery.
3. A sensor apparatus as claimed in claim 2 wherein the extracted fluid supplied by an extraction element is any portion of the milk obtained from a dairy animal within a single milking operation.
4. A sensor apparatus as claimed in claim 3 wherein the extracted fluid supplied by an extraction element is foremilk.
5. A sensor apparatus as claimed in any previous claim wherein an extraction element is formed from a single teatcup which includes a pulsator valve associated with a pulsation system.
6. A sensor apparatus as claimed in claim 5 which includes four extraction

element teatcups associated with four independent pulsator lines.

7. A sensor apparatus as claimed in any one of claims 2 to 6 wherein a single collection line collects all milk delivered from a single animal.
8. A sensor apparatus as claimed in any previous claim which includes at least one sensor integrated into a collection line.
9. A sensor apparatus as claimed in any previous claim wherein a sensor measures electrical conductivity.
10. A sensor apparatus as claimed in any one of claims 4 to 9 wherein a controller is formed by a pulsator controller of a dairy animal milking machine.
11. A sensor apparatus as claimed in claim 10 wherein a pulsator controller sequentially activates the pulsator valves of each teatcup.
12. A sensor apparatus as claimed in claim 11 wherein a single extraction element only is pulsated at one time.
13. A sensor apparatus as claimed in claim 11 wherein a pair of extraction elements are pulsated at one time.
14. A sensor apparatus as claimed in any previous claim wherein a controller allows a drainage delay period between activation of different extraction elements.
15. A sensor apparatus as claimed in any one of claims 11 to 14 wherein the first extraction element or elements activated by a controller are selected randomly.
16. A sensor apparatus as claimed in any one of claims 10 to 15 wherein the pulsator valves of non-activated extraction elements are partially activated

during extraction of fluid from an activated extraction element.

17. A sensor apparatus as claimed in claim 16 wherein partial activation of an extraction element does not cause fluid to be extracted and delivered to at least one collection line.
18. A sensor apparatus as claimed in any previous claim which includes an indicator adapted to receive an output signal from the sensor, said indicator being adapted to issue an alarm signal indicating abnormal fluid has been delivered from an extraction element or elements.
19. A sensor apparatus as claimed in claim 18 which includes a diversion system associated with the indicator to isolate abnormal fluid.
20. A sensor apparatus as claimed in any one of claims 18 or 19 wherein fluid abnormality is detected through a comparison of ratios of sensor output signals obtained from fluid extracted from an alternative extraction element or elements.
21. A sensor apparatus as claimed in any one of claims 18 to 20 wherein a rolling average of sensor readings is employed to detect abnormalities in extracted fluid.
22. A controller adapted for use with extraction machinery, said extraction machinery including a plurality of extraction elements which when activated are adapted to deliver an extracted fluid from two or more extraction elements into at least one collection line,  
wherein the controller is adapted to control the activation of said extraction elements to prevent fluid supplied from all extraction elements entering said at least one collection line at any one time.

23. A controller as claimed in claim 22, said controller being adapted to activate a pulsator valve associated with each extraction element wherein each pulsator valve is associated with a single independent pulsator line.
24. A sensor apparatus substantially as herein described with reference to and as illustrated by the accompanying drawings and/or examples.
25. A controller substantially as herein described with reference to and as illustrated by the accompanying drawings and/or examples.
26. A method of operating a controller substantially as herein described with reference to and as illustrated by the accompanying drawings and/or examples.